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The Influence of Personality and Demographic Variables on Anxiety Management Training

by

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Abstract

The effectiveness of Anxiety Management Training as a viable technique for reducing state and trait anxiety has been demonstrated by several investigators. In the majority of the studies, a university sample as subjects for treatment was used. In this study, the effectiveness of Anxiety Management Training with subjects of diverse backgrounds was examined. The variables considered were subjects' education level, residency (rural versus urban), sex, socioeconomic status, age, and extent to which the subject's personality was intact.

Subjects were selected from those responding to advertisements in local newspapers requesting the response of individuals interested in training in the control of stress and anxiety. An individual was seen as suitable for the present study if they scored at or above the sixtieth percentile on the IPAT Anxiety Scale.

The IPAT Self Report Anxiety Scale was chosen as the instrument with which to measure the anxiety level of the subjects. Pre-test and post-test measures were taken for both the Treatment and Control Groups. The Blishen Occupational Class Scale was used to determine the socioeconomic status of each individual in the study. The Willoughby Schedule was selected as a means for determining the degree of personality functioning of each subject.

A t-test for the difference between the means was performed on the overall anxiety level of the Treatment and Control Groups. The results showed a significant drop in level of anxiety for the Treatment Group between pre-test and post-test measures on the IPAT Anxiety Scale. The Control Group did not show a significant decrease in anxiety level from pre-test to post-test.

A two factor analysis of variance with repeated measures on one factor was used to examine the possible effects the particular variables considered might have on the benefits subjects experienced in therapy with Anxiety Management Training. The results showed that education level, age, sex, residency, and socioeconomic status had no bearing on the effectiveness of Anxiety Management Training. Each of the different subject groups considered under the aforementioned variable headings received equivalent significant benefit from Anxiety Management Training. The same was found for the degree of personality functioning of the subject, as subjects of varying degrees of personality intactness achieved equal significant success with Anxiety Management Training.

It was concluded that Anxiety Management Training was an effective therapeutic technique for reducing state and trait anxiety in individuals of varied backgrounds. The results of the study were then discussed in relation to implications for therapy and further research.

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I. THE THESIS PROBLEM

A. Introduction

"Mr. S., you can see Dr. R. now." Mr. S. responded to the receptionist's call by making his way to the psychologist's office. Mr. S., the client, can best be described as an elderly male, of rural residency, and the recipient of little formal education. His tattered apparell was reflective of his low economic status. In the reception area, Mrs. J. waited patiently for her opportunity to see Dr. R. Mrs. J. represented a stark contrast to Mr. S.. Not only was she female, but she was the daughter of a prominent city businessman and married to a successful lawyer. Mrs. J. herself was well educated, having attended the best universites in the country.

Although the scenario presented is purely hypothetical, given that this became reality, can a conclusion be reached as to which client would benefit more from therapy? Is it possible some people make better subjects for therapy and have a better chance for improvement? According to Gross:

> *The answer is an unequivocal "yes." The ideal patient should be able to easily absorb dogma and ideas of the most abstract, even outlandish dimension. He should be philosophically adaptable and able to ape the therapist's value system and biases. The more he agrees with the therapist, the better his chances of being helped.*
>
> (Gross, 1978, p. 48)

The "ideal client" as referred to by Gross, has been the subject of research for quite some time. Where the

psychotherapeutic process is concerned, the client variable together with the investigation of therapist influence on therapy appears to constitute the majority of the research in this area. A third important factor (e.g. therapist-client interaction) has received minimal attention. Since the topic to be addressed by this thesis is directed toward client attributes, it is the first factor, client suitability, that is an issue here.

Research acknowledging client characteristics and their effect on therapy has essentially followed two paths. The focus has either been to evaluate the client variables related to a prolonged stay in therapy or, as this study has undertaken, to evaluate the outcome of therapy and its dependence or lack of dependence upon certain client variables.

Continuation in therapy has often been viewed as a means to successful treatment. It is usually assumed by those utilizing this methodology, that a certain amount of contact with a therapist must be made before anything in the form of therapeutic aid can take place. Early termination, according to these investigators, necessarily affects the amount of change expected and it is primarily for this reason that they have looked upon a premature end to therapy as a failure of the client to benefit from the experience. As a result, research has concentrated on attempts to determine whether certain variables associated with clients can be used to predict the length of time spent in therapy.

Focus has essentially been directed at demographic (socioeconomic status, education, age) and personality factors.

However, research concerning client factors related to continuation in therapy seem to be of secondary importance with regard to the problem this study is designed to approach. The treatment procedure to be utilized in this research is of a behavioral orientation and rather brief in relation to many other psychotherapeutic interventions. Consequently, the evaluation of the process of therapy would be inappropriate, not only because behavioral strategies are short-term, but as Garfield (1978) mentions, behavioral interventions seldom are affected by problems of attrition. Thus, concentration will be on the assessment of client variables and their possible predictive value as far as successful therapeutic outcome is concerned. Moreover, the latest Albany conference, as reported by Barlow and Wolfe (1981), on behavioral approaches to anxiety disorders, suggests concentration on client variables as the productive direction for research. One of the recommendations put forward at the conference with regard to outcome exploration was to encourage research which examines the differences between those clients who benefit from therapy and those who do not. The importance of such a recommendation and the direction the recommendation conveys to the present study is outlined hereafter.

B. The Problem

The importance of determining whether a relationship exists between client variables and the successful outcome of treatment using Anxiety Management Training technique lies in the potential clinical usefulness of such a procedure. Presently, the literature concerning Anxiety Management Training has not considered the problem of client-outcome association. As will be noted in the literature review specifically related to Anxiety Management Training, the majority of studies in this area have used a university population as the subject sample. Thus, a problem of concern here is the possibility that treatment success is unique to a population exhibiting similar characteristics as those associated with the study samples, and not with a sample of different origin. More specifically,this study represents an effort to see if: (1)Anxiety Management Training reduces general anxiety of the group as a whole, and (2) certain client variables have an effect on the outcome of therapy when Anxiety Management Training is the primary technique.

Having access to information of this nature would be useful to a therapist in clinical practice. Information regarding the effect of certain demographic and personality variables and their relationship to successful treatment could give the prospective user of Anxiety Management Training an indication as to the range of clients Anxiety Management Training could help. This would allow the

therapist to use the technique with those clients with whom it has been shown to be most effective.

From the preceding review, it may be seen that research concerning the association of certain client variables with therapeutic outcome could be useful. For example, if Anxiety Management Training is suitable only for clients manifesting certain characteristics, the usefulness of the technique is limited to such a specific population. On the other hand, if Anxiety Management Training is shown to be effective with a broad range of clients, the utility of Anxiety Management Training is enhanced significantly. Where a therapist is aware of this research, time and energy can be utilized more efficiently in determining a treatment procedure suitable for a client experiencing anxiety related problems. As well, the expenditure of client time and money may be minimized if a therapist has confidence the technique will work with a certain individual. These concerns constitute the focus of the present thesis. The chapter to follow will contain both a review of the literature concerned with research on client factors associated with therapeutic outcome, and a review of the literature specifically dealing with Anxiety Management Training.

II. REVIEW OF RELATED LITERATURE

A. Survey of Factors Influencing Outcome of Counseling

The goal of investigators researching client variables and therapy success is very similar to the one upon which the present study is based, with only slight modification. Whereas their goal has often been to determine what type of clients are best suited for some form of therapeutic intervention, the aim of this study is to determine the relationship of client types and benefit from a specific treatment procedure (e.g. Anxiety Management Training). Although there is a difference in the degree of specificity with respect to the designation of the type of therapy utilized, the former rarely mentioning anything more than a general heading such as "a psychoanalytic approach", "a behavioral approach", etc., a review of such literature as it pertains to the present study is informative. By considering some of the more representative studies, it will be possible to field rough generalizations for the design and conduct of the present research.

Research into the effects of demographic and personality variables on the client with regard to outcome is extensive, however, very few of the studies have been of an empirical nature. As well, the conclusions of such studies are often found to conflict with one another, thereby making it somewhat difficult to establish whether or not a relationship between a specific client variable and

therapeutic outcome is evident. An attempt will be made to arrive at a reasonable conclusion with respect to the possible predictive essence of each client variable under scrutiny.

Socioeconomic Status and Outcome of Therapy

To begin with, an overview of the importance of social class, or socioeconomic status (S.E.S.) as a predictor of successful therapy for the client is offered. Luborsky, Auerbach, Chandler, Cohen, and Bachrach (1971), in a rather elaborate review of several studies, found conflicting results. In the five studies they considered pertaining to socioeconomic status and outcome, two reported no relationship, two indicated a positive relationship, and in a study Luborsky et al. claim was poorly designed, they found an association of positive outcome with lower socioeconomic status. The conclusion Luborsky et al. reach from their review of previous research is that socioeconomic status is predictive of improvement as a result of therapy, with those individuals of higher socioeconomic status having a better chance of success. However, Garfield (1978) in his review on client variables in psychotherapy, feels that the findings of Luborsky et al. reflect essentially no relationship between socioeconomic status and outcome. Garfield's conclusion comes as a result of his analysis of the studies reviewed by Luborsky et al., and most notably, one of the studies reporting a positive relationship between

socioeconomic status and outcome. According to Garfield, this study was replete with deficiencies in its methodology, and as a result, the "findings are questionable". Lorion (1973) and Hayes (1978) more recently discussed socioeconomic status and prediction of therapeutic results and arrive at the same conclusions as Garfield in stating that socioeconomic status has no apparent effect on treatment outcome. Sosis, Karoly, and Ruelman (1980) in an exploratory study, also report results dismissing the importance of socioeconomic status and outcome. Sosis et al. found that it did not matter whether success was assessed by the client or therapist, socioeconomic status in their study was not correlated with treatment success. Rounsaville, Weissman and Prusoff (1981), in a study examining the use of patient variables as predictors of outcome found that social class was not significantly predictive. Their analysis reveals that social class could account for less than five percent of the total variance in outcome. Gross (1978) on the other hand, feels the socioeconomic status of a person is highly significant to his success or failure in psychotherapy. Gross bases his opinion on the observation that individuals of low S.E.S. will experience difficulty understanding the abstract workings of psychology and eventually terminate therapy prematurely. From this review on the utility of socioeconomic status as a predictor of success in therapy, it seems there is overwhelming support for the lack of a relationship between socioeconomic status

and outcome. Although Gross conceivably presents a logical argument, his opinion is in need of validation in order for it to have a significant bearing on the outcome literature.

Education and Outcome of Therapy

Although education is correlated to some extent with socioeconomic status, it appears there is a more positive relationship between education and outcome. In his analysis of six different studies, Garfield (1980) found four studies reporting that as the level of the client's education rises, the chances of the client improving as a result of therapy also increases. The remaining two studies he examined found no significant results. Despite the apparent positive relationship between education and outcome observed by Garfield, he is cautious in his interpretation of the findings as he indicates that of the studies reviewed by him, the use of therapist ratings was undertaken in the determination of the outcome of therapy. Luborsky et al. (1971) in their review of seven studies also find a positive relationship between education and outcome. Of the seven studies, they found five to reflect educational status of the client and benefits received as a result of therapy as being positively related, and two studies to report a non-significant relationship. Rounsaville et al. (1981), in their research involving patient and process variables as predictors of outcome, were unable to identify education of the client as being positively related to outcome. Rather,

they concluded that education was a non-significant factor as far as outcome prediction was concerned, as this client variable was able to account for little more than five percent of the outcome variance. At present, despite the few studies indicating a lack of a relationship between education and outcome, it appears that the research overall leans in the direction of a positive relationship between education and outcome.

Age and Outcome of Therapy

Age as a client variable and its potential use as a predictor of outcome in therapy requires some consideration. Luborsky et al. (1971) in their analysis of eleven different studies have attempted to show evidence of a relationship between age and outcome. They found four research papers which indicated that younger patients benefit most from psychotherapy, five studies with non-significant results, and two studies which indicated that older people profit more from therapy. However, Luborsky et al. state that the two studies mentioning a positive association between age and success in therapy used a limited age range of clients. More precisely, it was found that older patients in one study had a mean age of twenty seven, and in the second study, a positive relationship between age and outcome was reported with an age range spanning only the ages twenty to forty. On the basis of this discovery, Luborsky et al. tend to ignore the latter two studies indicating that older

patients obtained better outcome, and rather conclude that "older patients tend to have a slightly poorer prognosis" (p. 151). Garfield (1978) criticizes the studies Luborsky et al. base their conclusions upon, and Garfield states that the consistency across age ranges is absent in several of the studies, thereby making it difficult to warrant comparison. As a result, Garfield is inclined to reserve judgement as far as age is concerned, and feels to date that it is better to conclude that age has not been shown to be associated with outcome. Rounsaville et al. (1981) provide support for this statement by Garfield. Their study utilized a patient group with a wide age range (less than 30, thirteen subjects; 30 - 39, ten subjects; 40 and over, thirteen subjects) and found no significant relationship between age and outcome. Thus, with respect to age and outcome, the nature of the research makes it difficult to formulate hypotheses concerning age as a predictor of outcome. For the time being, it is assumed from the literature reviewed that there does not appear to be existent an age outcome relationship.

Sex and Outcome of Therapy

Where sex of the client has been regarded as a potential predictor variable with respect to outcome, the findings seem to indicate that the sex of the client has no bearing upon the results of therapy. Luborsky et al. (1971), in their research involving several studies dealing with

gender and outcome, found an equal number of studies showing men to be more successful than women and conversely, women to be more successful than men in therapy. From this, it was concluded that the sex of the individual does not appear to be related to positive therapeutic results. Garfield (1978) reaches the same conclusion in his analysis of a number of studies attempting to show this relationship, and concludes that at this point in time, there is not any evidence that allows for the possibility of the sex of the client being a significant variable in psychotherapy. Research by Sosis, Karoly and Ruelman (1980) did not produce results at variance with the conclusions of Luborsky et al. and Garfield. Sosis et al. report that the sex of the client was not shown to be correlated with the outcome of therapy. Thus, it appears at least for this client variable, that the literature reviewed points in the direction of a lack of a relationship between sex and outcome.

Personality and Outcome of Therapy

The use of personality variables as predictors of outcome in psychotherapy has been researched to some extent, with the conclusions often resting upon the criteria used for "level of adjustment" at the end of therapy. The results, because of the different means of assessing adjustment, have not readily lent themselves to comparison and consequently, the findings regarding personality as a client variable for prediction of outcome should be viewed

in a cautious and critical fashion (Garfield, 1978). With this in mind, a review of the research in this area reveals a detailed study by Luborsky et al. (1971) in which he analyzes twenty eight separate studies attempting to determine the existence of a relationship between personality and outcome. In fourteen of the studies, a significant positive relationship emerged, indicating that the healthier the patient to begin with, the better the prognosis for successful therapy. One study found the opposite, thereby revealing results stating that the more poorly adjusted individual does better in therapy. The remaining thirteen studies were non-significant with respect to personality functioning and outcome. From this Luborsky et al. conclude that "Initially sicker patients do not improve as much with psychotherapy as the initally healthier do". (p. 149)

Sloane, Staples, Cristol, Yorkton, and Whipple (1975), compared behavior therapy with psychoanalytic therapy on the client variable, personality. They found that less disturbed patients did well in psychoanalytic therapy, but where behavior therapy was concerned, the degree of disturbance was irrelevant as behavior therapy was beneficial to clients presenting various levels of disturbance.

Gross (1978) indicates that the level of personality functioning of a client can be a very good predictor of outcome in therapy. Gross bases his conclusions on research where psychotherapists were asked to describe a successful

client. Overwhelmingly, the patient was printed out as being not "very sick". Gross substantiates his conclusion by citing Mahrer's (1970) work where Mahrer arrives at the same stance as Gross, as he states as well that the ideal (one who improves) patient is initially not very sick.

Much of the research points in the direction indicating that the less disturbance manifested by a client, the better the prediction of successful therapy. The use of different criteria in arriving at these conclusions seems to render it somewhat tenuous. A more conservative interpretation of the literature then might be similar to the conclusions of Meltzoff and Korrneich (1970) and Garfield (1980) in their statements that the issue of the relationship of personality and outcome is still open to research.

As it stands, the review of the literature pertaining to the predictive value of client demographic and personality variables and therapeutic outcome is rather unclear. There does not appear to be enough solid evidence to state conclusively that a particular variable is or is not capable of being of prognostic value as far as outcome is concerned. It is precisely to this question that the present study is directed. Hence, it is hoped that a new understanding will evolve of the manner in which the personality and demography of clients affects the outcome of therapy. However, the intention of the researcher is not to provide a general all encompassing explanation for all forms of therapy, but rather a statement concerning a specific

form of treatment, Anxiety Management Training.

At this point, the review of the literature will come to rest on research that has been carried out with Anxiety Management Training. The focus of the review will concentrate on subject selection, as this will reflect on the demographic, and to some extent, personality variables that may have been influential in the outcome of therapy with this procedure. The following review will also shed some light on the rationale for studying the possible effects certain client variables may have had on the therapeutic outcome of the studies reviewed.

B. Therapeutic Applications of the Technique

Anxiety Management Training is a technique designed to treat the clinically common problem of general or free-floating anxiety. Its development can be attributed to Suinn and Richardson (1971), as a response to several deficiencies associated with current desensitization practices. The major problem with all forms of desensitization was the need to construct a specific hierarchy for each different difficulty that the client faced. Although desensitization has proven to be a suitable treatment for specific fears and phobias, the amount of time required to construct more than a very limited number of anxiety heirarchies renders desensitization impractical for chronic general anxiety.

The lack of existing behavioral techniques to provide a means for the client to effectively manage future anxiety was a second contributing factor leading to the development of Anxiety Management Training. Suinn and Richardson (1971) state that Anxiety Management Training is an "attempt at preparing the client for coping with future tensions when they arise and therefore may be considered a form of self-control therapy" (p. 499). The emergence of Anxiety Management Training as an alternative to existing techniques for alleviating anxiety was then two-fold, representing: (1) an effort to come up with a treatment regimen for general anxiety, and (2) to provide the client with sufficient skills to use in the possible event of anxiety onset at a later date.

At present, there does not appear to be research concerning the possibility of: (1) certain personality and demographic variables being associated with success at Anxiety Management Training, and (2) the efficacy of Anxiety Management Training as a treatment for many different types of individuals. Therefore, it seems appropriate to review the reported uses of the technique with a focus on the particular variables that may be influential for success with Anxiety Management Training.

The majority of studies have used university populations when demonstrating the efficacy of Anxiety Management Training with both specific and general anxiety. The initial study with Anxiety Management Training (Suinn

and Richardson, 1971) used a university population in comparing Anxiety Management Training with Systemamatic Desensitization in the treatment of mathematics anxiety. Subjects for the treatment groups were selected from students who responded to an announcement of a behavioral therapy program for the control of anxiety associated with mathematics. A screening intake interview was conducted to determine the appropriateness of their problem for therapy. No subject was accepted for therapy if the presenting problem appeared more related to lack of ability, inadequate background in mathematics fundamentals, or severe psychological disturbance. The control group consisted of students in an introductory psychology course participating in research for credit. Results of the study revealed that Anxiety Management Training was as effective as Systematic Desensitization at controlling mathematics anxiety when measured by pre-therapy and post-therapy improvement on the mathematical subtest of the Differential Aptitude Test. The control group improvement was negligible.

A second study which involved Anxiety Management Training treated generalized or public speaking anxiety (Nicolletti, 1972). The effectiveness of Anxiety Management Training was determined by comparing the Anxiety Management Training group with the "waitlist" controls and a no-problem control group. Subjects were undergraduate students referred by a counseling center for either generalized or public speaking anxiety. Random selection procedures were employed

in placing subjects in either the treatment group or "waitlist" group. Pre-post results on the IPAT Anxiety Scale and Taylor Manifest Anxiety Scale (for generalized anxiety), and the Public Speaking Anxiety Inventory (for public speaking anxiety) indicated that Anxiety Management Training was effective in reducing both generalized and public speaking anxiety when compared to a waitlist group.

Edie (1972) investigated the efficacy of three variations of Anxiety Management Training where subjects focused on imaginal scenes, physiological tension cues, or both during structured rehearsal. Subjects were college students looking for help for general or "free floating" anxiety problems. Pre and post anxiety results on the IPAT Anxiety Scale, the Anxiety Symptom Checklist, and the Public Speaking Inventory indicated that all three variations of Anxiety Management Training produced reductions in chronic anxiety as compared with untreated controls.

Richardson and Suinn (1973) in a sequel to their first study (Suinn and Richardson, 1971) demonstrated that Anxiety Management Training was as effective as Accelerated Massed Desensitization and Systematic Desensitization in the control of mathematics anxiety. All three treatment groups (Accelerated Massed Desensitization, Systematic Desensitization, and Anxiety Management Training) showed significant equivalent improvement on pretest - posttest measures on the Mathematics Anxiety Rating Scale (MARS) and Differential Aptitude Test (DAT) following therapy. The

subjects for this research project were university students responding to announcements of a desensitization program for mathematics anxiety. In addition to the sample composition being restricted to university students, it was also seen that the ratio of females to males was three to two. As the remainder of the literature review will reveal, when reported, the ratio of females to males consistently favored females. It is this consistency in sample selection across certain client variables that presently limits the possible generalizability of Anxiety Management Training over a range of clients. Hence, as previously stated, the research undertaken will hopefully address the issue concerning the relationship between certain client variables and therapeutic outcome.

Deffenbacher and Shelton (1978) also used Anxiety Management Training in comparing it with Systematic Desensitization in the reduction of test and other anxieties. Subjects for their study were university students, volunteering for a test-anxiety program. Most of the volunteers were females, outnumbering males by a three to one margin. Random assignment to either Systematic Desensitization or Anxiety Management Training groups was employed as a means of selection to either treatment. Results, as measured by pretest, posttest, and follow-up scores on the Test Anxiety Scale (TAS) and the Suinn Test Anxiety Behavior Scale (STABS) revealed that both Systematic Desensitization and Anxiety Management Training produced

significant reductions in test anxiety, but by follow-up, Anxiety Management Training produced significantly more test anxiety reduction. On one scale for general anxiety, the Fear Inventory (FI), both Systematic Desensitization and Anxiety Management Training produced and maintained significant anxiety reduction, however, only Anxiety Management Training reduced anxiety by followup (five weeks later) as measured by the Trait Anxiety Inventory (TAI).

Hutchings, Denney, Basgall, and Houston (1980) demonstrated Anxiety Management Training to be significantly more effective than applied relaxation training, relaxation only, and untreated controls in reducing generalized anxiety. Subjects were students enrolled in psychology courses at a university. Students who placed in the upper fifteen percent on the Taylor Manifest Anxiety Scale (TMAS) and Eysenck Personality Inventory (EPI) were selected for participation in the study. Posttest data revealed Anxiety Management Training subjects produced lower scores than relaxation only subjects, placebo and untreated control subjects on the neuroticism scale of the EPI. On the Trait-State Anxiety Inventory, the Anxiety Management Training group again scored lower than subjects in the relaxation only, placebo, and untreated controls groups. The authors of the study feel that results support the earlier evidence (Nicoletti, 1972; Edie,1972) for Anxiety Management Training as an effective treatment leading to significant reductions of general anxiety.

Deffenbacher, Michaels, Michaels, and Daley (1980) compared Anxiety Management Training to Self Control Desensitization. Subjects were selected from all the students in an introductory psychology program, if they scored in the upper five percent of the Debilitating Scale of the Achievement Anxiety Scale and were interested in a program for treatment of test anxiety. Final selection produced a characteristic breakdown witnessed in other studies previously presented, as the female to male ratio was three to one in favor of females. Results indicated Anxiety Management Training and Self-Control Desensitization were equally effective in reducing State and Trait debilitating anxiety. At follow-up, both Anxiety Management Training and Self-Control Desensitization revealed significant unplanned anxiety reduction.

One final study employing a university population as subjects compared the effectiveness of Anxiety Management Training with subject groups comprised of test anxious subjects, speech anxious subjects, or a combination of test anxious and speech anxious subjects (Deffenbacher, Michaels, Daley, Michaels, 1980). Introductory psychology students were selected for participation in the study if there was indication on self report measures (Achievement Anxiety Scale or Personal Report of Confidence as a Speaker) of debilitating anxiety in the areas of test taking or speech making. Results indicated Anxiety Management Training significantly reduced test and speech anxiety in both the

homogeneous and heterogeneous conditions. Follow-up assessment showed continued maintenance of anxiety reduction for both conditions.

Each of the remaining studies in the literature using Anxiety Managment Training as a treatment for anxiety appears to represent the sole example using Anxiety Management Training with subjects other than university students. Nally (1975) treated highly anxious adjudicated delinquents with Anxiety Management Training and found evidence to support Anxiety Management Training as an effective treatment modality for reducing anxiety in delinquents. Shoemaker (1976) treated anxious neurotic outpatients scoring above the seventy-fifth percentile on the IPAT Anxiety Scale with Anxiety Management Training, implosive therapy and muscle tension relaxation training. Results indicated only Anxiety Management Training led to significant reductions of general anxiety. Berghausen (1977) treated highly anxious (sixtieth percentile or above on the IPAT Anxiety Scale) subjects who responded to an advertisement in the media to participate in a program to reduce anxiety. Results revealed that Anxiety Management Training was effective in reducing general anxiety. Finally, a single subject study carried out by Bloom and Cantrell (1978) used Anxiety Management Training to treat a pregnant woman with suspected essential hypertension. Reduction in baseline levels of blood pressure reading were taken to indicate the effectiveness of Anxiety Management Training in

treating hypertension in pregnancy.

In summary, a review of relevant literature reveals that the reported use of Anxiety Management Training for the treatment of general anxiety is efficacious in nature. However, the problem with the studies todate, is the almost exclusive reliance upon a university population as treatment sample subjects. As for the few studies that did not use a student population for subjects, it is difficult to determine just how these subjects differ from a university sample. As well, where the studies reported the sex of the subjects undergoing treatment, the breakdown between males and females consistently favored females. It might be concluded that this resulted from females characteristically presenting problems related to anxiety more often. However, the success of each of the studies may be the consequence of having a greater proportion of females in treatment, thus producing overall success in therapy for the group. Closer inspection is needed in order to determine if indeed the sex of the client has a bearing on outcome with respect to Anxiety Management Training. At present then, the efficacy of Anxiety Management Training has been demonstrated over a narrow range of subjects and consequently, its potential success with a variety of subjects has been largely unassessed, to which end, the present research should be contributive.

III. METHOD AND PROCEDURE

A. Variables and Hypotheses

The following variables were introduced in Chapter II in the discussion of the literature pertaining to the focus of this study. These variables incorporated into the study design are overal anxiety level and social class, age, sex, education, and degree of personality functioning as they relate to the subject's success with Anxiety Management Training. The variable, rural versus urban residency of the subject, and its effect on therapy, will also be considered. Although not attended to in the literature review due to a lack of research on this variable, it is felt that this variable may have an influence on therapeutic success. The variables to be considered will now be operationalized in the form of hypotheses.

Anxiety Level

The measure of state and/or trait anxiety is defined as the total raw score obtained from the IPAT Anxiety Scale. As Anxiety Management Training is said to reduce the general level of anxiety of an individual, and consequently the group as a whole, the first hypotheses is:

1. There will be a decrease in the level of anxiety for the Treatment Group between pre-test and post-test measures.

As it was previously stated that Anxiety Management Training is said to reduce the general level of anxiety of the individual, since the Control Group is without treatment, the second hypothesis is:

2. There will not be a decrease in the level of anxiety for the Control Group between pre-test and post-test measures.

Effects of Demography on Treatment Outcome

Subjects were placed in their appropriate categories according to guidelines to be set out under the heading "Analysis." The effect of certain client demographic variables on the outcome of treatment was then assessed by monitoring whether or not a particular subgroup showed evidence of a decrease in anxiety level between pre-test and post-test measures on the IPAT Anxiety Scale. From Chapter II it was shown that research on socioeconomic status and success in therapy exhibited essentially no relationship. Thus the third hypothesis is:

2. There will be no evidence of variance in success between the different social classes.

As age was not seen to be related to therapeutic success, the fourth hypothesis is:

3. There will be no evidence of variance in success between the different age categories.

There appeared to be no relationship between the sex of the client and treatment benefits, as reported in Chapter II. Therefore the fifth hypothesis is:

4. There will be no be no evidence of variance in successes between males and females.

It may be recalled from Chapter II that the client's education level might affect the outcome of therapy. Research seems to indicate that as education level increases, the results of therapy become more positive. Thus the sixth hypothesis is:

5. There will be a difference in success of treatment between subject groups differing in education level.

Although the client's status as to where the majority of his life has been spent (rural vs urban), and its relationship to therapeutic outcome was not considered in the literature review due to lack of information regarding this client variable, the researcher felt this variable may have an association with successful therapy. However, since there does not appear to be research to support this, the resulting seventh hypothesis will be:

6. There will be no evidence of variance in success between rural versus urban subjects.

Effects of Personality Factors on Outcome

The effects personality of the subject may have on the outcome of therapy was measured in the same manner as was the effect of demography on outcome. Subjects were assigned to the appropriate category according to their initial level of neurotic functioning (as assessed by the Willoughby Scale). The outcome of treatment was determined by the extent to which each subgroup demonstrated a decrease in anxiety between pre-test and post-test measures on the IPAT Anxiety Scale.

Research on the level of personality functioning and its effect on outcome has shown that, for the most part, it is not possible to state conclusively the relationship between personality and outcome in therapy. Therefore the eighth hypothesis is:

. *There will be no evidence of variance in success between subjects reporting different levels of neuroticism.*

B. Subject Selection

Subjects were selected from the residents of the city of Edmonton and three surrounding townships, St. Albert, Sherwood Park, and Spruce Grove. Those individuals responding to the advertisement in their respective newspapers were asked to attend an initial meeting explaining further the treatment. Selection occurred from a population of about ninety subjects who volunteered to take part in the study. These people were asked to complete the

IPAT Anxiety Scale and short personality and demographic questionnaires. Those individuals scoring at or above the sixtieth percentile on the IPAT Anxiety Scale were selected for inclusion in the study. The final sample consisted of fifty-seven subjects in the Treatment Group and eleven subjects in the Control Group.

C. Instruments

Initial Screening Device - IPAT Anxiety Scale

Pre-Treatment Measure

The IPAT Anxiety Scale was used as the initial screening device for subjects deemed suitable to undergo the treatment of Anxiety Management Training. The level chosen as the cutoff point was the sixtieth percentile. Subjects scoring less than the sixtieth percentile were not included in the study. The sixtieth percentile as criterion for entrance into therapy was used since this corresponds to the level just below the seventh sten, which according to Cattell and Scheier (1963), is commensurate with individuals of borderline high anxiety.

The IPAT Anxiety Scale is a short, forty item questionnaire for the assessment of general "free" anxiety. Answers to each questionnaire item are in the order of true, false, or in between as the statement pertains to the individual himself.

Reliability coefficients for the IPAT Scale range from .80 to .93, depending on the nature of the sample and type

of reliability. This level of reliability was considered more than adequate for the purpose of the present study.

Validity coefficients are very high, ranging from .85 to .90. The test scores correlate significantly with self-report, physiological and psychiatric measures of anxiety. As well, the scores obtained from the IPAT Anxiety Scale differentiate markedly between normal individuals and high anxiety clinical individuals.

Willoughby Personality Schedule

The Willoughby Personality Schedule is intended as a quick estimate of the degree to which a person is emotionally adjusted. The schedule contains twenty-five items with content designed to reflect various emotional traits. Each item is answered on a five point scale in which 0 is negative and 1 to 4 are positive in increasing degrees. The greater the overall score (maximum 100), the greater the likelihood of that person being an emotionally poorly adjusted individual.

On a clinical population, it was observed that 80 percent of the population scored above 30 and 95 percent exceeded a score of 20. It appears that what the Willoughby measures is far more prevalent among people who come for treatment presenting conditions of emotional maladjustment than among a group from the normal population.

The cutoff or criterion level for distinguishing the healthier subject from the person suffering from emotional

difficulties as indicated by the Willoughby is a score of approximately 20 or lower. This is in agreement with Wolpe (1958), and it is felt that at or below this score reflects a point where an individual is demonstrating emotional stablity.

Occupational Class Scale

The Occupational Class Scale, developed by Blishen (1958) was employed to determine the socioeconomic status of each subject based upon their occupation. The scale is divided into seven classes, ranging from level 1, the most prestigious, consisting of judges, doctors, etc., to level 7. reserved for laborers, housekeepers, etc.. The major factor in determining where a particular occupation should be ranked was based on the relative prestige of the occupation. Class divisions were somewhat arbitrary, and as well, the size of the class intervals were unequal. It was decided the inequality of class intervals was necessary in order to avoid combining occupations of fairly low prestige with those of higher standing. The degree to which this occupational scale actually reflects the prestige ranking of the occupations it includes is very high, correlating .91 with a study by Tuckman. It might also be stated that the Blishen Occupational Class Scale was formulated on data from the old Dominion Bureau of Statistics, and therefore was normed on a Canadian population.

Post-Test Measure

The IPAT Anxiety Scale was used as a post treatment indicator of success or failure of the treatment procedure to reduce generalized anxiety. The treatment would be considered successful if the decrease in the scores from pre-test to post-test was significant. Test-retest reliability on the IPAT Anxiety Scale is .87, and is considered sufficient for the purpose of this study.

D. Procedure and Research Design

The screening procedure was devised to ensure selection of a relevant clinical population of those people who could be treated with Anxiety Management Training. Subjects selected for treatment completed the Willoughby Schedule along with a questionnaire information sheet in order that the necessary client personality and demographic variables might be identified. Post-treatment assessment using the IPAT Anxiety Scale was carried out one week after treatment.

Subjects were assigned to either the Treatment Group or the Control Group. The Treatment Group consisted of fifty-seven people. This group was broken down and random assignment was made to one of four subgroups of fourteen or fifteen members. Each subgroup received identical Anxiety Management Training treatment. The Control Group consisted of eleven subjects who received no treatment during the same three week period. Anxiety Management Training was provided for the Control Group upon completion of the study. During

the course of the study, ten subjects dropped out of the treatment group before termination. Of the ten subjects not completing therapy, at least four subjects indicated unforseen circumstances as the reason for terminating therapy.

Therapy consisted of six (sixty minute) group sessions and was conducted in the Education Clinic at the University of Alberta. Intervention was preceded by an explanation of anxiety in terms of learning theory.

The Treatment Phase

As mentioned previously, subjects assigned to any one of the four groups were seen two times per week on alternate days and at different time blocks for three weeks. There were a total of six treatment sessions lasting about sixty minutes each.

In the first session, an explanation of the rationale and theory (Suinn and Richardson, 1971; Eysenck, 1976; Rachman, 1977; Monte, 1980) underlying Anxiety Management training was given. Following this, the remainder and major part of the first session was devoted to relaxation training (Lazurus, 1976). After a brief explanation of the purposes and uses of relaxation training, tensing procedures were demonstrated and relaxation training was undertaken. Relaxation training in the first session dealt with physical relaxation. Completion of relaxation training was done during the second session, with the emphasis on mental

relaxation. During the second session, the subjects were asked to develop two or three personal scenes centering on a successful experience and a relaxing experience. Each person was to determine which experience was best for easing the "racing mind" syndrome. The third session began with a discussion of the homework assignment (to practice physical and mental relaxation) and followed with the subjects creating an anxiety arousing scene. The remainder of this session and the sessions to follow involved training subjects to acquire the ability to self-administer relaxation. Thus, the latter part of the third session consisted of having the counselor ask the subjects to imagine the anxiety arousing scene. The amount of time visualizing the scene varied, moving from forty-five seconds to two minutes. The counselor then requested the subjects to terminate the scene and instructed the subjects in ways to reduce the tensions (e.g. by deep breathing, muscle tension relaxation). The fourth session carried on much the same as the previous with one exception: the subjects initiated relaxation procedures once the counselor had instructed them to terminate the anxiety arousing scene. In the fifth session, subjects initiated scene termination in conjunction with self-instructed relaxation procedures. The sixth session involved further practice of self-initiated relaxation, with subjects actively relaxing away tensions and at the same time staying in the scene in their imagination. Throughout all scene presentations, subjects

were instructed to pay attention to the internal and external cues of anxiety arousal and to use these as early warnings of impending anxiety. Homework in the form of relaxation practice in relation to the present session activities was given after each session.

The Post-Treatment Phase

One week after the treatment phase, each subject was again administered the IPAT Anxiety Scale. The raw score served as the final measure for each individual and was used for determination of the degree of success each subject obtained in reducing anxiety after learning Anxiety Management Training procedures.

E. Analysis

Prior to analysis of the results, subject raw scores on the IPAT Anxiety Scale were assigned to various classes according to the hypotheses set out at the beginning of the present chapter. The first variable considered, socioeconomic status, required the use of the Blishen Occupational Class Scale as a means of placing raw scores in the different categories set out by the scale. Although the Blishen Scale employs seven levels of socioeconomic status, levels one and two were combined, as were levels six and seven. This was a result of a lack of sufficient numbers for purposes of analysis in levels one and six (see Appendix C).

The second variable, age, was arbitrarily broken down into four different age groups. The four groups decided upon were: ages 18 to 29; 30 to 39; 40 to 49; 50 and over (see Appendix D).

The third variable considered, sex of the subject, involved simple assignment to either group by gender (see Appendix E).

Arbitrary classes were set up for the fourth variable, education. Subject raw scores were assigned to one of four groups based on the type of education completed by the subject. The four groups were: I - did not finish high school; II - high school; III - technical school; IV - university (see Appendix F).

For the fifth variable, rural versus urban residency, subjects were placed in the rural or urban category depending on where the majority of the life of the subjects had been spent (see Appendix G).

The sixth variable, degree of neuroticism, again involved the use of an instrument, the Willoughby Schedule. According to the Willoughby Schedule, subjects scoring at 20 or below are considered to be relatively free of any detrimental neurotic behavior, thus comprising group one. The second group contained individuals considered to have a moderate degree of neuroticism, with scores on the Willoughby between 21 and 30. Group three was termed moderately high in neuroticism, subjects scoring between 31 and 45 on the Willoughby. The final group, highly neurotic,

contained individuals scoring above 45 on the Willoughby (see Appendix H).

The preceding discussion gave indication as to the manner in which the variables were broken down for purposes of analysis. Following is a description of the type of statistic to be used for analysis with regard to the eight hypotheses presented earlier and involving the variables just discussed.

Hypotheses three, four, five, six, seven, and eight were all related to the consideration as to whether or not certain client variables were instrumental in the determination of the outcome of therapy. In other words, the intention was to decide to what extent outcome was contingent upon a particular client variable. In each case, a Two Factor Analysis of Variance with Repeated Measures was utilized to analyze whether client variables and outcome were independent of each other. Criterion significance was set at .05.

Hypotheses one and two were concerned with the overall reduction of general anxiety of the Treatment Group and Control Group (see Appendix A and B for pre-test and post-test raw scores on the IPAT Anxiety Scale for Treatment and Control Group). The means of pre-test and post-test treatment measures on the IPAT Anxiety Scale were calculated for the groups. A t-test of the difference between two means for correlated samples was employed to analyze if the mean difference for the group between pre and post treatment

measures was different. Criterion significance was set at .05.

IV. RESULTS AND CONCLUSIONS

The reporting of results, for ease of reader recall follows a consistent format: a restatement of the hypothesis, after which the pertinent statistics and appropriate conclusions are presented. A record of the anxiety level of each subject prior to and after treatment as well as group membership is shown in the Appendices.

Hypothesis 1

There will be a decrease in the level of anxiety for the treatment group between pre-test and post-test measures.

To test Hypothesis 1, a Test of Significant Differences was performed, as depicted in Table 1.

Table 1

Summary, Test of Significance of Difference Between Pre-Test and Post-Test Levels of Anxiety for Treatment Group (N=47)

	Mean	S.D.	t	df	p
Pre-test measure	45.38	9.63			
Post-test measure	30.04	11.14			
			9.43	46	.0000

Conclusion: Intervention with the Anxiety Management Training technique produced a significant decrease in the level of anxiety as reported by the treatment group, and

therefore supports Hypothesis 1.

Hypothesis 2

There will not be a decrease in the level of anxiety for the control group between pre-test and post-test measures.

To test Hypothesis 2, a Test of Significant Differences was performed as depicted in Table 2.

Table 2

Summary, Test of Significance of Difference Between Pre-Test and Post-Test Levels of Anxiety for Control Group (N=11)

	Mean	S.D.	t	df	p
Pre-test measure	41.09	9.34			
Post-test measure	38.09	13.57			
			1.39	10	.1950

Conclusion: As can be seen from Table 2, the results support Hypothesis 2, as there was not a significant decrease in anxiety level between pre-test and post-test measures for the control group. As the Control Group did not show a decrease in level of anxiety, credence is provided for the proposition that change in anxiety level for the Treatment Group was more likely a result of the treatment rather than some other factor.

Hypothesis 3

There will be no evidence of variance in success between subjects in different social classes.

To test Hypothesis 3, a Two Factor Analysis of Variance with Repeated Measures was performed as depicted in Table 3.

Table 3

Summary of Analysis of Variance: Social Class (N=47)

Source of Variation	SS	df	MS	F	p
Between Subjects	7335.75	46			
'A' Main Effects	1285.03	4	321.259	2.18	.0872
Subjects Within Group	6177.25	42	147.08		
Within Subjects	8391.50	47			
'B' Main Effects	5559.82	1	5559.82	98.67	.0000
'AxB' Interaction	495.678	4	123.92	2.12	.0855
'B'xSubj Within Group	2366.69	42	56.35		

Conclusion: As can be seen from Table 3, intervention with the Anxiety Management Training technique produced an equally significant decrease in anxiety level for subjects across all social classes. Therefore, the results support Hypothesis 3. It can also be observed from Table 3 that the different socioeconomic subgroups within the Treatment Group did not differ in self reported levels of anxiety, either at the pre-test or post-test measure.

Hypothesis 4

There will be no evidence of variance in success between subjects in different age categories.

To test Hypothesis 4, a Two Factor Analysis of Variance with Repeated Measures was performed as depicted in Table 4.

Table 4

Summary of Analysis of Variance: Age (N=47)

Source of Variation	SS	df	MS	F	p
Between Subjects	7335.75	46			
'A' Main Effects	292.06	3	97.35	0.60	.6212
Subjects Within Group	7007.25	43	162.60		
Within Subjects	8391.50	47			
'B' Main Effects	4208.48	1	4208.48	70.14	.0000
'AxB' Interaction	255.90	3	85.30	1.42	.2496
'B'xSubj Within Group	2580.13	43	60.00		

Conclusion: As can be observed from Table 4, the results support Hypothesis 4. Intervention with the Anxiety Management Training technique produced an equally signficant decrease in anxiety level for subjects across all age categories. In addition, the results show no difference between age subgroups within the Treatment Group for self report levels of anxiety.

Hypothesis 5

There will be no evidence of variance in success between males and females.

To test Hypothesis 5, a Two Factor Analysis of Variance with Repeated Measures was performed as depicted in Table 5.

Table 5

Summary of Analysis of Variance: Sex (N=47)

Source of Variation	SS	df	MS	F	p
Between Subjects	7335.75	46			
'A' Main Effects	34.16	1	34.16	0.21	.6485
Subjects Within Group	7301.63	45	162.26		
Within Subjects	8391.50	47			
'B' Main Effects	4693.34	1	4693.34	76.88	.0000
'AxB' Interaction	114.19	1	114.19	1.87	.1782
'B'xSubj Within Group	2747.13	45	61.05		

Conclusion: As can be seen from Table 5, intervention with the Anxiety Management Training technique produced an equally significant decrease in anxiety level for both males and females, and therefore provides support for hypothesis 5. The results also indicate a lack of a difference between the two sexes on self report measures on the IPAT Anxiety Scale.

Hypothesis 6

There will be a difference in success of treatments between subjects differing in education level.

To test Hypothesis 6, a Two Factor Analysis of Variance with Repeated Measures was performed as depicted in Table 6a.

Table 6a

Summary of Analysis of Variance: Education (N=47)

Source of Variation	SS	df	MS	F	p
Between Subjects	7335.75	46			
'A' Main Effects	1784.66	3	594.89	4.70	.0063
Subjects Within Group	5442.63	43	126.57		
Within Subjects	8391.50	47			
'B' Main Effects	4987.36	1	4987.36	78.22	.0000
'AxB' Interaction	116.83	3	38.94	0.61	.6117
'B'xSubj Within Group	2741.88	43	63.77		

Table 6b

Summary, Scheffe Post Hoc Comparisons: Education (N=47)

Comparison		F(obs)	F(crit)	p
I	II	2.1978	8.430	NS
I	III	0.1212	8.430	NS
I	IV	4.6242	8.430	NS
II	III	3.6860	8.430	NS
II	IV	12.5600	8.430	S
III	IV	3.4590	8.430	NS

Conclusion: As can be seen from Table 6a, intervention with the Anxiety Management Training technique produced a significant decrease in anxiety level across all levels of education. Consequently, support is not found for Hypothesis 6, as there was no difference in success between subject groups differing in education level. However, there was an indication that a difference was present with regard to initial and final IPAT Anxiety Scale raw score between certain groups with different educational levels. Post hoc comparisons using the Scheffe method was employed. From Table 6b, it can be seen that the difference exists between groups II and IV as far as initial and final IPAT scores are concerned. Group II was the designation for high school level subjects and Group IV was the designation for

university degree level subjects. The difference observed between the two groups was seen to be the initial higher IPAT raw score and subsequent higher final raw score for group II as compared to group IV.

Hypothesis 7

There will be no evidence of variance in success between rural versus urban subjects.

To test Hypothesis 7, a Two Factor Analysis of Variance with Repeated Measures was performed as depicted in Table 7.

Table 7

Summary of Analysis of Variance: Residency (N=47)

Source of Variation	SS	df	MS	F	p
Between Subjects	7335.75	46			
'A' Main Effects	91.69	1	91.69	0.57	.4544
Subjects Within Group	7244.13	45	160.98		
Within Subjects	8391.50	47			
'B' Main Effects	4614.18	1	4614.18	72.82	.0000
'AxB' Interaction	9.77	1	9.77	0.15	.6964
'B' xSubj Within Group	2851.50	45	63.37		

Conclusion: As can be seen from Table 7, intervention with the Anxiety Management Training technique produced an equally significant decrease in anxiety level for both rural and urban subjects, and therefore supports hypothesis 7. The

results also show no indication of a difference between rural or urban subgroups within the Treatment Group on self report measures on the IPAT Anxiety Scale.

Hypothesis 8

There will be no evidence of variance in success between subjects reporting different levels of neuroticism.

To test Hypothesis 8, a Two Factor Analysis of Variance with Repeated Measures was performed as depicted in Table 8.

Table 8

Summary of Analysis of Variance: Neuroticism (N=47)

Source of Variation	SS	df	MS	F	p
Between Subjects	7335.75	46			
'A' Main Effects	557.11	3	185.70	1.21	.3191
Subjects Within Group	6622.94	43	154.02		
Within Subjects	8391.50	47			
'B' Main Effects	2299.62	1	2299.62	39.83	.0000
'AxB' Interaction	461.49	3	153.83	2.66	.0598
'B'xSubj Within Group	2482.88	43	57.74		

Conclusion: As can be seen from Table 8, intervention with the Anxiety Management Training technique produced an equally significant decrease in anxiety level for subjects reporting different levels of neuroticism, and therefore is supportive of hypothesis 8. In addition, the results show no

difference between the subgroups of varying degrees of neuroticism on self report measures of anxiety as assessed by the IPAT Anxiety Scale.

In summary, the Treatment Group showed a significant decrease in self-report anxiety levels between pre-test measures on the IPAT Anxiety Scale. The Control Group did not show this decrease in the level of anxiety on the same measure. The results supported all but one of the hypothesis related to the demographic variables and relation to success at therapy under consideration in this study. For the subgroups within the Treatment Group pertaining to the sex, rural versus urban residency, age, and socioeconomic status of the subjects, all subgroups experienced a decrease in anxiety level as a result of the treatment. In addition, the results did not show any difference between the various subgroups as far as pre-test and post-test measures on the IPAT Anxiety Scale are concerned.

The one demographic variable hypothesis not receiving support from the results was that of education. Where it has been hypothesized that there would be a difference in success of treatment between subjects differing in education level, this was not found to be the case. All subgroups within the variable, education produced an equivalent reduction in level of anxiety. However, the results did show that there was a difference present with respect to the initial and final levels of anxiety between the subgroups, and more specifically between groups II and IV.

Results for the single personality variable, neuroticism, provided support for the hypothesis regarding degree of neuroticism and success in therapy. Subgroups of varying levels of neuroticism experienced equivalent decreases in level of anxiety as measured by the IPAT Anxiety Scale.

From the results, there appears to be rather conclusive evidence in support of the treatment, Anxiety Management Training, as an effective means to reduce levels of anxiety in subjects of various backgrounds. The following chapter is a discussion of the findings and the implications of the findings for therapy and research.

V. DISCUSSION

The results of the study suggest that the Anxiety Management Training technique provides an effective means for the reduction of specific and/or general anxiety. The employment of relaxation control in response to early warning signals as an alternative to heightened levels of stress and anxiety gave subjects a resource by which to arrest anxiety and its undesirable consequences before it reached its often irreversible state. Moreover, learning and benefitting from the technique was not limited to a certain type of person (i.e. a well-educated young female), but rather was a skill acquired by the Treatment Group as a whole. Evidence was provided by the results which indicate that each demographic or personality subgroup within the Treatment Group reduced self-report levels of anxiety to the same degree.

A. Implications for Therapy

A primary implication arising from the results of this study is the provision of a suitable method with which to deal with specific or general anxiety for a broad spectrum of clients. The fact that the technique, Anxiety Management Training, appears to be beneficial for clients of various personality and demographic backgrounds must certainly enhance the utility of this procedure. In therapy, the practicality of a therapeutic procedure stands out when it

is shown to work with numbers greater than one, especially when, in the practice of psychotherapy, one considers that the cliche "what works with one individual does not necessarily work with another" is often considered the norm.

In addition to its suitability with clients of various demographic and personality backgrounds, the results point to the flexibility of Anxiety Management Training. Since Anxiety Management Training does not require a commonality as far as anxiety-arousing stimuli are concerned, the technique was shown to be valuable in treating clients with very different anxieties within a single Anxiety Management Training group. The practicality of this advantage of Anxiety Managment Training seems quite apparent. First, obscure anxieties could be treated within a group setting. Secondly, the need for homogeneous treatment groups is not necessary when using this procedure. Basically then, adjunctive counseling for anxiety control would be an avenue made much more accessible with the technique of Anxiety Management Training.

Related to the first consideration for therapy is that it is evident from the results that clients of varied backgrounds can learn the skill and consequently, provide themselves with a coping skill to deal with future stress and anxiety. This is especially important for the client, as it alleviates the need for therapist contact each time a new problem arises. Where Cautela (1969) expressed concern that behavior therapists had not attempted to eliminate

maladaptive behavior without the aid of the therapist, it appears Anxiety Management Training has effectively responded to the rather significant statement by Cautela. Whatever, the client characteristics might be, the development of a means to cope with impending anxiety seems viable for all.

The results of the study seem to imply that the teaching/learning process used by the Anxiety Management Training technique is an effective model for therapy. The active involvement of the client in therapy appears significant in helping the client receive benefit from it. It is likely that participation as opposed to simply talking leads to a quicker realization by the client that something can be done to deal with the problem of concern.

In addition to its wide-reaching benefits as far as client characteristics are concerned, the treatment, Anxiety Management Training, is further enhanced by the brevity of the process. The study involved six hours of therapeutic instruction which, as the results indicate, were sufficient to enable the subjects to learn the skill. Being brief (and relatively inexpensive) should make it that much more a promising therapy where the client problem is stress and anxiety.

Anxiety Management Training is a technique that is easily learned by therapists. Its standardized and step-wise approach lend to the ease at which this form of therapy can be acquired by therapists as part of their therapeutic

repertoire.

B. Implications for Further Research

Although the present study likely involved subjects classifiable as "anxiety neurotic", it would be useful to use the technique of Anxiety Management Training with a sample actually diagnosed as "anxiety neurotic". The success of this study should be an indication that the procedure would have merit in helping the above mentioned sample.

It might prove beneficial to conduct a similar study and later to do follow-up research on the lasting effects of the technique. It seems viable to hypothesize that one could expect at least maintenance in the decreased level of anxiety reported at the end of therapy and possibly a further decrease in anxiety level due to the effect of continued practice with the procedure.

Research on cost-effectiveness of the treatment Anxiety Management Training could be an approach that research in the future might take. It would seem that this technique might be an attractive form of therapy due to its brevity, effectiveness, and applicability to groups of sizeable number (i.e. 15 to 20 members). An interesting point necessary and important here is related to the fact that Anxiety Management Training was found to be effective for heterogeneous treatment groups as far as the client problem is concerned. With this in mind, it might be possible to start treatment once sufficient numbers are arrived at,

rather than waiting for enough clients with the same problem, which would certainly involve a greater time line. With reduced time between referral and treatment, client drop-out might be decreased. This idea might be considered within cost-effectiveness research, providing knowledge that should be important and worthwhile to both the therapist and consumer.

A methodological consideration might involve the type of instrument used to assess the level of anxiety of the subjects in the study. Although this study used a measure of anxiety designed to tap the affective-emotional aspect of the disorder, further research could employ a different method of assessment. Research at a later date might appraise the physiological component of anxiety. Suinn (1976) indicated that people under stress accumulate more cholesterol in their blood vessels and are more likely to have high blood pressure. After treatment with a similar population as the present study, a test could be made to determine whether or not cholesterol levels were reduced and at the same time, whether or not the treatment had a similar effect on blood pressure levels.

Research into the efficacy of the technique could also judge the benefit the client receives from the treatment from a behavioral viewpoint. Thus, a more objective measure might be to determine whether a client is dealing with everyday stress at work, home, etc. in a more appropriate manner. Where the client presented with specific problems

related to stress and anxiety, (ex. unable to sleep, excess prespiration) investigation of whether or not the client problems dissipated after therapy could take place. The use of observable, easily validated criteria might prove to be a very effective means of confirming the beneficial nature of the treatment.

The use of a placebo control group in place of a no-treatment control group might provide further rigor to the present study. The placebo control group could aid in ruling out the factor that contact only with a therapist has an effect on the anxiety level of the subject.

Finally, a variation of the technique might be researched. In addition to instruction in Anxiety Management Training, clients could also be taught a form of self-monitoring following the approach outlined by Hiebert and Fox (1980). By self-monitoring personal anxiety level, clients can become more aware of individual levels of calmness and tension. In combination with Anxiety Management Training, clients might more easily become aware of the early physiological and bodily cues alerting them to a possible buildup of stress and anxiety. Thus, the addition of self-monitoring might initially aid an individual in the recognition of stress. Further research might place emphasis on this variation with Anxiety Management Training.

Essentially, Anxiety Management Training was shown to be effective with subjects of various demographic and personality backgrounds. The utility of the procedure to be

able to deal with different client problems in a single homogeneous group setting was also demonstrated. There is need however, for research concerning follow-up, use of different instruments for assessing change in anxiety, and cost-effectiveness studies. Concentration on further research should provide therapists planning to use this technique with a substantial and informative background on the procedure.

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VII. APPENDICES

A - H

APPENDIX A

Treatment Group Anxiety Scores: Overall

(scores are reported as IPAT Anxiety Scale raw scores)

Subject	Pre-test	Post-test	Difference
01	50	33	-17
02	50	56	+06
03	35	31	-04
04	48	51	+03
05	48	27	-21
06	50	25	-25
07	44	23	-21
08	38	15	-23
09	33	29	-04
10	54	22	-32
11	46	35	-11
12	48	39	-09
13	37	22	-15
14	37	34	-03
15	45	19	-26
16	35	34	-01
17	52	18	-34

Appendix A cont'd

Subject	Pre-test	Post-test	Difference
18	52	20	-32
19	45	23	-22
20	40	14	-26
21	48	13	-35
22	34	17	-17
23	69	51	-18
24	61	50	-11
25	48	47	-01
26	38	16	-22
27	64	48	-16
28	52	39	-13
29	39	17	-22
30	33	16	-17
31	29	29	00
32	30	18	-12
33	67	44	-23
34	36	34	-02
35	55	18	-37
36	35	21	-14

Appendix A cont'd

Subject	Pre-test	Post-test	Difference
37	43	33	-10
38	58	30	-28
39	56	38	-18
40	45	37	-08
41	41	34	-07
42	44	39	-05
43	49	25	-24
44	56	30	-26
45	47	29	-18
46	32	39	+07
47	37	30	-07

Mean = 45.38 Mean = 30.04 Diff = -15.34

Range = 69-29 Range = 56-13

Number = 47 Number = 47

APPENDIX B

Control Group Anxiety Scores: Overall

(scores are reported as IPAT Anxiety Scale raw scores)

Subject	Pre-test	Post-test	Difference
01	44	47	+03
02	48	54	+06
03	57	54	-03
04	46	40	-06
05	40	27	-13
06	28	13	-15
07	43	50	+07
08	47	48	+01
09	40	32	-08
10	21	18	-03
11	38	36	-02

Mean = 41.09 Mean = 38.09 Diff = -03.00

Range = 57-21 Range = 54-13

Number = 11 Number = 11

APPENDIX C

Treatment Group Anxiety Scores: Socioeconomic Status

(scores are reported as IPAT Anxiety Scale raw scores)

Level 1 and 2

Subject	Pre-test	Post-test	Difference
01	38	16	-22
02	30	18	-12
03	54	22	-32
04	47	29	-18
05	48	13	-35
06	48	27	-21
07	33	16	-17

Mean = 42.57 Mean = 20.14 Diff = -22.43

Range = 54-33 Range = 29-13

Number = 07 Number = 07

Appendix C cont'd

Level 3

Subject	Pre-test	Post-test	Difference
01	44	39	-05
02	36	34	-02
03	52	39	-13
04	40	14	-26
05	41	34	-07
06	61	50	-09
07	29	29	00
08	44	23	-21
09	56	38	-18
10	34	17	-17
11	35	34	-01
12	52	18	-34
13	45	37	-08

Mean = 43.77 Mean = 31.23 Diff = -12.54

Range = 61-29 Range = 50-14

Number = 13 Number = 13

Appendix C cont'd

Level 4

Subject	Pre-test	Post-test	Difference
01	49	25	-24
02	50	25	-25
03	58	30	-28
04	46	35	-11
05	38	15	-23
06	48	47	-01
07	37	22	-15
08	45	19	-26
09	55	18	-37
10	35	21	-14

Mean = 46.10 Mean = 25.70 Diff = -20.40

Range = 58-35 Range = 47-15

Number = 10 Number = 10

Appendix C cont'd

Level 5

Subject	Pre-test	Post-test	Difference
01	64	48	-16
02	43	33	-10
03	37	30	-07
04	37	34	-03
05	48	39	-09
06	52	20	-32
07	50	33	-17

Mean = 47.29 Mean = 33.86 Diff = -13.41

Range = 64-37 Range = 48-20

Number = 07 Number = 07

Appendix C cont'd

Level 6 and 7

Subject	Pre-test	Post-test	Difference
01	39	17	-22
02	56	30	-26
03	35	31	-04
04	67	44	-23
05	69	51	-08
06	50	56	+06
07	32	39	+07
08	48	51	+03
09	45	23	-22
10	33	29	-04
	Mean = 47.40	Mean = 37.10	Diff = -10.30
	Range = 69-32	Range = 56-17	
	Number = 10	Number = 10	

APPENDIX D

Treatment Group Anxiety Scores: Age

(scores are reported as IPAT Anxiety Scale raw scores)

Age: 18 - 29

Subject	Pre-test	Post-test	Difference
01	49	25	-24
02	56	30	-26
03	52	39	-13
04	40	14	-26
05	41	34	-07
06	34	17	-17
07	50	56	+06
08	55	18	-37
09	38	16	-18
10	48	13	-35
11	33	29	-04
	Mean = 45.00	Mean = 26.17	Diff = -18.83
	Range = 56-33	Range = 56-13	
	Number = 11	Number = 11	

Appendix D cont'd

Age: 30 - 39

Subject	Pre-test	Post-test	Difference
01	44	39	-05
02	64	48	-16
03	36	34	-02
04	39	17	-22
05	58	30	-28
06	37	30	-07
07	67	44	-23
08	54	22	-32
09	69	51	-18
10	29	29	00
11	56	38	-18
12	45	19	-26
13	32	39	+07
14	37	22	-15
15	45	23	-22
16	52	20	-32
17	48	27	-21

Appendix D cont'd

Age: 33 - 39

Subject	Pre-test	Post-test	Difference
18	52	18	-34
19	45	37	-08
	Mean = 47.84	Mean = 30.89	Diff = -16.95
	Range = 69-29	Range = 17	
	Number = 19	Number = 19	

Appendix D cont'd

Age: 40 - 49

Subject	Pre-test	Post-test	Difference
01	35	31	-04
02	30	18	-12
03	43	33	-10
04	61	50	-09
05	37	34	-03
06	47	29	-18
07	38	15	-23
08	35	34	-01
09	48	51	+03
10	33	16	-17

Mean = 40.70 Mean = 31.10 Diff = -09.60

Range = 61-30 Range = 51-15

Number = 10 Number = 10

Appendix D cont'd

Age: 50 and over

Subject	Pre-test	Post-test	Difference
01	50	25	-25
02	46	35	-11
03	48	39	-09
04	48	47	-01
05	35	21	-14
06	50	33	-17

Mean = 46.17 Mean = 33.33 Diff = -12.84

Range = 50-35 Range = 47-21

Number = 06 Number = 06

APPENDIX E

Treatment Group Anxiety Scores: Sex

(scores are reported as IPAT Anxiety Scale raw scores)

Female			
Subject	Pre-test	Post-test	Difference
01	49	25	-24
02	56	30	-26
03	52	39	-13
04	40	14	-26
05	44	23	-21
06	55	18	-37
07	48	13	-35
08	33	29	-04
09	36	34	-02
10	39	17	-22
11	58	30	-28
12	67	44	-23
13	54	22	-32
14	69	51	-18
15	29	29	00
16	56	38	-18
17	45	19	-26

Appendix E cont'd

Female			
Subject	Pre-test	Post-test	Difference
18	32	39	+07
19	45	23	-22
20	52	18	-34
21	35	31	-04
22	30	18	-12
23	43	33	-10
24	61	50	-11
25	47	29	-18
26	48	51	+03
27	33	16	-17
28	50	25	-25
29	46	35	-11
30	48	47	-01
	Mean = 46.67	Mean = 29.67	Diff = -17.00
	Range = 69-29	Range = 51-13	
	Number = 30	Number = 30	

Appendix E cont'd

Male			
Subject	Pre-test	Post-test	Difference
01	41	34	-07
02	34	17	-17
03	50	56	+06
04	38	16	-22
05	44	39	-05
06	64	48	-16
07	37	30	-07
08	37	22	-15
09	52	20	-32
10	48	27	-21
11	45	37	-08
12	37	34	-03
13	38	15	-23
14	35	34	-01
15	48	39	-09

Appendix E cont'd

Male			
Subject	Pre-test	Post-test	Difference
16	35	21	-14
17	50	33	-27
	Mean = 43.12	Mean = 30.71	Diff = -12.41
	Range = 64-34	Range = 56-15	
	Number = 17	Number = 17	

APPENDIX F

Treatment Group Anxiety Scores: Education

(scores are reported as IPAT Anxiety Scale raw scores)

High School Not Completed

Subject	Pre-test	Post-test	Difference
01	50	25	-25
02	35	31	-04
03	58	30	-28
04	37	30	-07
05	46	35	-11
06	44	23	-21
07	48	47	-01
08	48	51	+03
09	35	21	-14
10	33	29	-04
	Mean = 43.40	Mean = 32.20	Diff = -11.20
	Range = 58-33	Range = 51-21	
	Number = 10	Number = 10	

Appendix F cont'd

High School Completed

Subject	Pre-test	Post-test	Difference
01	64	48	-16
02	56	30	-26
03	43	33	-10
04	61	50	-11
05	67	44	-23
06	37	34	-03
07	69	51	-18
08	38	15	-23
09	56	38	-18
10	35	34	-01
11	50	56	+06
12	48	13	-35
13	45	23	-22
14	52	20	-32
15	52	18	-34

Appendix F cont'd

High School Completed

Subject	Pre-test	Post-test	Difference
16	50	33	-27
17	45	37	-08
	Mean = 51.06	Mean = 33.94	Diff = -21.12
	Range = 69-35	Range = 56-13	
	Number = 17	Number = 17	

Appendix F cont'd

Technical School Completed

Subject	Pre-test	Post-test	Difference
01	44	39	-05
02	36	34	-02
03	49	25	-24
04	52	39	-13
05	40	14	-26
06	41	34	-07
07	54	22	-32
08	29	29	00
09	48	39	-09
10	45	19	-26
11	55	18	-37

Mean = 44.82 Mean = 28.36 Diff = -16.46

Range = 55-29 Range = 39-14

Number = 11 Number = 11

Appendix F cont'd

University Degree Completed

Subject	Pre-test	Post-test	Difference
01	39	17	-22
02	30	18	-12
03	47	29	-18
04	34	17	-17
05	32	39	+07
06	37	22	-15
07	38	16	-22
08	48	27	-21
09	33	16	-17

Mean = 37.56 Mean = 22.33 Diff = -15.23

Range = 48-30 Range = 39-16

Number = 09 Number = 09

APPENDIX G

Treatment Group Anxiety Scores: Residency

(scores are reported as IPAT Anxiety Scale raw scores)

Rural			
Subject	Pre-test	Post-test	Difference
01	49	25	-24
02	50	25	-25
03	39	17	-22
04	30	18	-12
05	43	33	-10
06	48	39	-09
07	44	23	-21
08	35	34	-01
09	48	51	+03
10	55	18	-37
11	52	18	-34
12	33	29	-04
13	50	33	-17
	Mean = 44.31	Mean = 27.92	Diff = -16.39
	Range = 55-30	Range = 51-17	
	Number = 13	Number = 13	

Appendix G cont'd

Urban			
Subject	Pre-test	Post-test	Difference
01	44	39	-05
02	64	48	-16
03	36	34	-02
04	52	39	-13
05	40	14	-26
06	41	34	-07
07	35	31	-04
08	58	30	-28
09	37	30	-07
10	61	50	-11
11	67	44	-23
12	37	34	-03
13	54	22	-32
14	47	29	-18
15	69	51	-18
16	46	35	-11
17	56	30	-26
18	29	29	00

Appendix G cont'd

Urban			
Subject	Pre-test	Post-test	Difference
19	38	15	-23
20	48	47	-01
21	32	39	+07
22	56	38	-18
23	45	19	-26
24	34	17	-17
25	45	37	-08
26	50	56	+06
27	33	16	-17
28	37	22	-15
29	38	16	-22
30	48	13	-35
31	45	23	-22
32	52	22	-32

Appendix G cont'd

Urban			
Subject	Pre-test	Post-test	Difference
33	35	21	-14
34	48	27	-21
	Mean = 45.79	Mean = 30.85	Diff = -14.94
	Range = 69-29	Range = 56-13	
	Number = 34	Number = 34	

APPENDIX H

Treatment Group Anxiety Scores: Neuroticism

(scores are reported as IPAT Anxiety Scale raw scores)

Level 1: Negligible

Subject	Pre-test	Post-test	Difference
01	46	35	-11
02	37	22	-15
03	36	34	-02
04	35	21	-14
05	40	14	-26
	Mean = 38.80	Mean = 25.20	Diff = -13.60
	Range = 46-35	Range = 35-14	
	Number = 05	Number = 05	

Appendix H cont'd

Level 2: Moderate

Subject	Pre-test	Post-test	Difference
01	32	39	+07
02	44	39	-05
03	37	30	-07
04	45	37	-08

Mean = 39.50 Mean = 36.25 Diff = -03.25

Range = 45-32 Range = 39-30

Number = 04 Number = 04

Appendix H cont'd

Level 3: Moderately High

Subject	Pre-test	Post-test	Difference
01	48	47	-01
02	48	39	-09
03	48	51	+03
04	58	30	-28
05	50	25	-25
06	52	39	-13
07	29	29	00
08	45	23	-22
09	33	16	-17
10	55	18	-37
11	33	29	-04
12	38	15	-23
13	44	23	-21
14	34	17	-17
15	35	34	-01
16	56	30	-26
17	49	25	-24

Appendix H cont'd

Level 3: Moderately High

Subject	Pre-test	Post-test	Difference
18	37	34	-03
19	45	19	-26
	Mean = 44.05	Mean = 28.58	Diff = -15.47
	Range = 58-29	Range = 51-15	
	Number = 19	Number = 19	

Appendix H cont'd

Level 4: High

Subject	Pre-test	Post-test	Difference
01	54	22	-32
02	50	33	-17
03	67	44	-23
04	48	27	-21
05	30	18	-12
06	35	31	-04
07	39	17	-22
08	41	34	-07
09	43	33	-10
10	64	48	-16
11	69	51	-18
12	56	38	-18
13	61	50	-11
14	52	20	-32
15	38	16	-22
16	52	18	-34
17	48	13	-35

Appendix H cont'd

Level 4: High

Subject	Pre-test	Post-test	Difference
18	50	56	+06
19	47	29	-18
	Mean = 49.68	Mean = 31.47	Diff = -18.21
	Range = 69-30	Range = 56-13	
	Number = 19	Number = 19	